

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/36854

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C23C 16/26, 16/56; D01F 9/127
 US CL : 427/200, 206, 249.1, 255.31, 301, 903; 423/445B, 447.3

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 427/532, 540, 77, 78, 200, 206, 249.1, 255.31, 301, 903; 423/445R, 445B, 447.1, 447.2, 447.3; 356/501

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,401,526 B1 (DAI et al) 11 June 2002 (11.06.2002), entire document.	21, 56-60
Y		----- 1-20, 22-55, 61-73
X	US 2002/0122766 A1 (LIEBER et al) 05 September 2002 (05.09.2002), entire document.	21, 56-60
Y		----- 1-20, 22-51, 53-55, 61-73
Y	US 2002/0046953 A1 (LEE et al) 25 April 2002 (25.04.2002), entire document.	1-20, 22-55, 61-73
Y	US 6,146,227 A (MANCEVSKI) 14 November 2000 (14.11.2000), entire document.	1-20, 22-55, 61-73
Y	US 2003/0102222 A1 (ZHOU et al) 05 June 2003 (05.06.2003), paragraphs [0105] - [0106].	52
Y	US 2003/0189202 A1 (LI et al) 09 October 2003 (09.10.2003), paragraphs [0008] and [0065].	52
Y	US 2002/0001977 A1 (GOLE et al) 03 January 2002 (03.01.2002), paragraph [0014].	52

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

26 April 2005 (26.04.2005)

Date of mailing of the international search report

10 MAY 2005

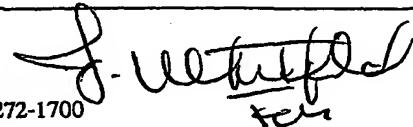
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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 2004/0036403 A1 (ONO et al) 26 February 2004 (26.02.2004), entire document.	1-73
A,P	US 2004/0126491 A1 (TAI et al) 01 July 2004 (01.07.2004), entire document.	1-73